WYC:lmp 10/19/04 P0325   PATENT #9

                                                                              10/19/04

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of   Art Unit 2621

Rhoads et al.

Serial No.: 09/811,366   **CERTIFICATE OF FAXING**
                                                    I hereby certify that this paper and the documents
Filed: March 15, 2001   referred to as being attached or enclosed herewith
                                                    are being facsimile transmitted to the U.S. Patent
Examiner: A. Johns   Office telephone 703-746-5747 on October 19,
                                                    2004.
For: PRINTING MEDIA AND METHODS
       EMPLOYING DIGITAL WATERMARKING

Date: October 19, 2004   _____
                                                    William Y. Conwell
                                                    Attorney for Applicant

INFORMATION DISCLOSURE STATEMENT

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants submit herewith information of which they are aware, and which they believe may be material
to the examination of the application and in respect of which there may be a duty to disclose in
accordance with 37 C.F.R. § 1.56.

> In addition to the patent document listed on the attached Form PTO-1449, the undersigned notes that
> the present assignee, Digimarc Corporation, proposed to a prospective customer that Digimarc could
> provide technology allowing the customer to steganographically watermark blank paper for purposes
> of (a) signaling to compliant reproduction equipment that a document printed on the paper should not
> be reproduced; (b) forensic tracking of documents, or (c) document authentication. Such proposal was
> made verbally, in about April, 1999.
>
> Additionally, the undersigned notes that Digimarc's corporate stationery is marked with a digital
> watermark pattern conveying a plural-bit identifier. When decoded by a compliant system (e.g., web
> cam/software), this identifier is passed to a remote database (Digimarc's MediaBridge service), which
> returns the URL of Digimarc's home web page, allowing the system to load the web page for display.
> This watermarked stationery (which additionally is pre-printed with a corporate logo, office address,
> telephone and fax numbers) was first used at least as early as April, 2001.

(The broadest pending claims, e.g., 1 and 30, are supported by priority application 09/127,502, filed July
31, 1998 and cited at substitute spec, page 1, line 7. The '502 spec notes:

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To illustrate, an intaglio plate was engraved (using a numerically controlled engraving apparatus), to a depth of slightly less than 1 mm, in accordance with a 3.2 x 3.2 cm. noise-like block of watermark data. The watermark data was generated as described above (e.g. 128 bits of data, randomly distributed in a 128 x 128 cell array), and summed with a correspondingly-sized block of calibration data (implemented as discrete grey-scaled cells, rather than the line/weave pattern detailed above). In this embodiment, the data was not kept within a small range of digital numbers, but instead was railed to a full 8-bit dynamic range.) Banknote paper was intaglio-pressed into this plate -- without ink -- yielding a generally flat substrate with a 3.2 x 3.2 cm textured region therein. Only on fairly close inspection was the texturing visible; on casual inspection the paper surface appeared uniform.

This textured paper was placed -- textured extrema down -- on the platen of an conventional flatbed scanner (of the sort commonly sold as an accessory for personal computers), and scanned. The resulting image data was input to Adobe's Photoshop image processing software, version 4.0, which includes Digimarc watermark reader software. The software readily detected the watermark from the textured paper, even when the paper was skewed on the scanner platen.

The optical detection process by which a seemingly blank piece of paper can reliably convey 128 bits of data through an inexpensive scanner has not been analyzed in detail; the degree of localized reflection from the paper may be a function of whether the illuminated region is concave or convex in shape. Regardless of the explanation, it is a remarkable phenomenon to witness.

Support is also found, e.g., in the 1994 priority application 08/215,289 (cited at page 1, line 10, re pre-marking photographic paper).)

This information disclosure statement is being filed after the mailing date of a First Office Action on the merits and before the first mailing date of Final Office Action (37 C.F.R. § 1.113), or Notice of Allowance (37 C.F.R. § 1.311).

The submission of information herein and on the attached Form PTO-1449 is not intended as an admission that any such information constitutes prior art against the claims of the application under examination. Applicants do not waive any right to take any appropriate action to antedate or otherwise remove any information from the attached Form PTO-1449.

Please charge the fee of **$180.00** under 37 C.F.R. § 1.17(p) and any additional fees or credit any over-payment in connection with the filing of this Information Disclosure Statement to Deposit Account No. 50-1071.

Date: October 19, 2004

Customer Number 23735

Telephone: 503-885-9699
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Respectfully submitted,

DIGIMARC CORPORATION

By_____
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